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10/589,240	08/14/2006	Tsuyoshi Yamaguchi	2006_1208A	6940
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/589,240

**Applicant(s)**

YAMAGUCHI ET AL.

**Examiner**

ADNAN BAIG

**Art Unit**

4172

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date 8/14/2006

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION.**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9, 12, 13, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeshima (US 2002/0032025).

Regarding Claim 1, Maeshima discloses a terminal whose opportunity to access a communication medium is controlled in accordance with a control frame issued from a control station connected to a network, (a control station transmits frames or management information to a wireless network, [0010] Lines 1-5. Referring to Fig. 1, a terminal such as item 102 has access to the wireless network, [0038 Lines 1-6].

the terminal comprising:

a control frame detection portion of detecting the control frame issued from the control station, ([0068 Lines 1-4] Referring to Fig. 14, the master control station which is a terminal, receives a frame or network information and at step s11 the frame is detected, [0087 Lines 4-7])

a control frame memory portion of storing control information contained in the control frame, Referring to Fig. 2, a terminals configuration is illustrated where items 21A and 21B store the frame information in memory, [0040].

a substitute frame issuance determination portion of determining to issue a substitute frame when the control frame detection portion does not detect the control frame until a predetermined first time period is elapsed, (Referring to Fig. 1, once terminal 100 fails to detect a frame, an alternate terminal will serve to detect frame information, [0047 Lines 1-7]. When a predetermined time is elapsed, an alternate control station will determine whether to issue a substitute frame within the network, [0012-0013]).

and

a substitute frame issuance portion of creating a frame which is the same as or equivalent to the control frame, as the substitute frame, based on the control information stored in the control frame memory portion when the substitute frame issuance determination portion determines to issue the substitute frame, and issuing the created substitute frame, Referring to Fig.1, once terminal 100 fails to detect a frame, an alternate terminal will serve to issue or transmit frame information within the network. See [0048 Lines 1-7].

Regarding Claim 2, Maeshima discloses the terminal according to claim 1, wherein the control frame memory portion stores the control frame only when the control frame has

a change. Referring to Fig. 1, each terminal within the network contains different frame information for a period of time that is elapsed, and for every terminal in the network, a frame has a change of state which contains its own structure [0045] and is stored in a storing section such as items 21A and 21B of Fig. 2.

Regarding Claim 3, Maeshima discloses the terminal according to claim 1, wherein the substitute frame issuance portion transmits a refusal response frame indicating that a request which is transmitted from another terminal and should be responded to by the control station is refused, during issuance of the substitute frame periodically, (The master control station responds to all other terminals in the network [0049 Lines 1-7]. A terminal in the network is capable of sending a request to the master control station within the network, [0074].

Regarding Claim 4, Maeshima discloses the terminal according to claim 1, wherein the substitute frame issuance portion does not respond to a request which is transmitted from another terminal and should be responded to by the control station, during issuance of the substitute frame periodically, (The master control station responds to all other terminals in the network [0049 Lines 1-7]. A terminal in the network is capable of sending a request to the master control station within the network, [0074].

Regarding Claim 5, Maeshima discloses the terminal according to claim 1, wherein the substitute frame issuance portion stops issuing the substitute frame during issuance of the substitute frame periodically, if receiving a frame from the control station, (Referring to Fig. 16 at step s33, when the central control station is communicating with its corresponding terminals, issuance of the substitute frame will stop or discontinue during periods of time and the terminal in claim 1 will continue its operation as a usual terminal, [0077-0078].

Regarding Claim 6, Maeshima discloses the terminal according to claim 1, wherein the substitute frame issuance portion determines whether or not a frame is received from the control station until a predetermined second time period is elapsed, (a second predetermined time period is shown to be elapsed for terminal 105. [0062]

and the terminal further comprises:

a control station mode portion of causing the terminal to operate as a control station when the substitute frame issuance portion determines that a frame is not received from the control station until the predetermined second time period is elapsed. (When a master terminal fails to communicate frame information an alternate terminal station within the network can operate as a central control station, [0047]. Referring to Fig. 11, Terminal 107 becomes a central control station once terminal 100 fails to communicate, [0024].

Regarding Claim 7, Maeshima discloses the terminal according to claim 6, wherein the control station mode portion collects information required as a control station from another terminal. (When the central control station is no longer able to communicate any another terminal is able to become a candidate central control station and receive notification, [0079].

Regarding Claim 9, Maeshima discloses the terminal according to claim 1, wherein, when the control frame is not detected until the first time period is elapsed, the terminal tries to access the communication medium in accordance with control information contained in a previously received control frame. (Referring to Fig. 1, once terminal 100 fails to detect a frame after an elapsed period of time, an alternate terminal will serve to detect and transmit frame information which was contained or stored in a previous control frame, [0047 Lines 1-7]. When a predetermined time is elapsed, an alternate control station will issue a substitute frame within the network, [0012-0013]).

Regarding Claim 12, Maeshima discloses the terminal according to claim 1, wherein a candidate terminal which issues the substitute frame is designated by the control station, (Referring to Fig.17 of Maeshima, Device 214 which is the central control station selects devices 211, 215, and 216 to be candidate terminals, [0010].)

the terminal further comprises a candidate terminal designation recognition portion of recognizing whether or not the control station designates the terminal as the candidate terminal, [0113].

when the candidate terminal designation recognition portion recognizes that the terminal is designated as the candidate terminal, the substitute frame issuance determination portion determines whether or not to issue the substitute frame, assuming that a time period which is shorter than a first time period in a terminal which is not designated as the candidate terminal, is the first time period, When a predetermined time is elapsed, an alternate control station will determine whether to issue a substitute frame within the network, [0012-0013]).

Regarding Claim 13, Maeshima discloses the terminal according to claim 12, where the candidate is given a priority, [0010 lines 12-17].

the substitute frame issuance determination portion uses a first time period having a length corresponding to the priority to determine whether or not to issue the substitute frame, [0045 lines 14-21].

Regarding Claim 16, Maeshima discloses the terminal according to claim 1, wherein an identifier for the control station is described in the control frame. (Each frame has a structure with an information transmission region or identifier which contains the state of



each frame, [0045]. In regards to the specification, a new address indicates that there is a change in the frame, [0060].

Regarding Claim 17, Maeshima discloses the terminal according to claim 16, wherein the terminal operates as the control station when an identifier for the terminal is described in the substitute frame, (An identifier or information transmission region [0045] is in the substitute frame when an alternate terminal operates as the central control station. A terminal is shown to operate as a control station [0047].)

Regarding Claim 18, Maeshima discloses a method executed in a terminal whose opportunity to access a communication medium is controlled in accordance with a control frame issued from a control station connected to a network, (a control station transmits frames or management information to a wireless network, [0010] Lines 1-5. Referring to Fig. 1, a terminal such as item 102 has access to the wireless network. See [0038 Lines 1-6].

a method comprising:

detecting the control frame issued from the control station, ([0068 Lines 1-4] Referring to Fig. 14, the master control station which is a terminal, receives a frame or network information and at step s11 the frame is detected. See [0087 Lines 4-7])

storing control information contained in the control frame, Referring to Fig. 2, a terminals configuration is illustrated where items 21A and 21B store the frame information in memory. [0040]

determining to issue a substitute frame when the control frame is not detected until a predetermined first time period is elapsed; (Referring to Fig. 1, once terminal 100 fails to detect a frame, an alternate terminal will serve to detect frame information, [0047 Lines 1-7]. When a predetermined time is elapsed, an alternate control station will determine whether to issue a substitute frame within the network, [0012-0013]).

creating a frame which is the same as or equivalent to the control frame, as the substitute frame, based on the stored control information when it is determined to issue the substitute frame; and issuing the created substitute frame. Referring to Fig.1, once terminal 100 fails to detect a frame, an alternate terminal will serve to issue or transmit frame information within the network. See [0048 Lines 1-7].

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 10, 11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeshima.

Regarding Claim 8, Maeshima discloses a terminal being able to collect information from another terminal in the network in order to take action of being a control station [0051],

with the option of resetting the network [0083 Lines 1-10], but does not necessarily teach a reset signal issued to the network. However in another embodiment of a similar described system, Maeshima teaches that once a terminal becomes a central control station, a reset signal is issued to the communication network, [0006-0007]. Therefore it would have been obvious to one of ordinary skill in the art, to implement a reset signal to the network once another terminal becomes a central control station, in order to maintain operation in a communication network.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeshima (US 2002/0032025) in view of Isumi (5,815,816).

Regarding Claim 10, Maeshima discloses the terminal according to claim 1, wherein substitute frames are issued in the network by substitute terminal stations to gain the right of access to a communications medium [0012-0013], but does not disclose a scenario where terminal stations compete for a right to access the medium. Isumi teaches a communication network where in a telephone system, base stations compete

with one another with incoming calls to determine which receives priority to the communication channel, Col. 14 Lines 30-55. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to have terminal stations in the network compete for substitute frame issuance in order to have priority of access to the communications medium so the network remains in operation.

Regarding Claim 11, the combination of Maeshima and Isumi disclose the terminal according to claim 10, and further teaches a candidate terminal which issues the substitute frame is designated by the control station, Referring to Fig.17 of Maeshima, Device 214 which is the central control station selects devices 211, 215, and 216 to be candidate terminals, [0010].

the candidate terminal is given a priority, and a terminal having a higher priority has a higher probability of acquiring the access right in the access right competition for issuance of the substitute frame, [0133].

Regarding Claim 14, the combination of Maeshima and Isumi disclose the terminal according to claim 11, and further teaches where the candidate terminal is designated by the control station based on information about a communication state of a terminal in the network, [Maeshima, 0092, 0099].

Regarding Claim 15, the combination of Maeshima and Isumi disclose the terminal according to claim 11, and further teaches a situation that the terminal is designated as a candidate terminal, when the control station designates another terminal as a candidate terminal, the designation of the terminal as a candidate is released, (Referring to [Maeshima,0049 Lines 12-24], a scenario is shown where a new candidate terminal is selected or designated for another portion of the network based on its communication quality.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis West can be reached on 571-272-7859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ADNAN BAIG/  
Examiner, Art Unit 4172

/Lewis G. West/  
Supervisory Patent Examiner, Art Unit 4172